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REMARKS

In the office action mailed March 23, 2005, the Examiner rejected Claims 1, 2, 6 and 9 under 35 U.S.C. §102(e) as being anticipated by Stanich et al. U.S. Patent 6,597,813 ("Stanich"). The Examiner also rejected Claims 3 - 5, 7, 8, 10 and 11 under 35 U.S.C. §103(a) as being unpatentable over Stanich. Applicant respectfully traverses these rejections. By this response claims 1, 6 and 9 have been amended and claims 12 - 15 have been added.

As stated above, claims 1 and 9 have been rejected under 35 U.S.C. §102(e) as being anticipated by Stanich. In the office action, the Examiner alleges that Stanich discloses a screen wherein substantially all the threshold values corresponding to gray levels between g_{s1} and g_{s2} coincide with black positions in a constraining checkerboard pattern and substantially all the threshold values corresponding to gray levels between g_{s2} and g_{s3} coincide with white positions in the constraining checkerboard pattern at col. 3, lines 29-37. The Examiner further alleges that Stanich discloses not placing pixels vertically or horizontally adjacent to each other until after a gray level threshold (col. 5, lines 30-36) and that utilizing the checkerboard pattern (col. 5, lines 16-19), this limits using a constrained checkerboard pattern until a gray level threshold is reached.

Applicant respectfully submits that the Examiner has failed to set out a prima facie case of anticipation of claims 1 and 9 as Stanich fails to teach or suggest each of the elements of Applicant's claims 1 and 9. In particular, Stanich does not teach or suggest a screen wherein substantially all the threshold values corresponding to gray levels between g_{s1} and g_{s2} coincide with black positions in a constraining checkerboard pattern and substantially all the threshold values corresponding to gray levels between g_{s2} and g_{s3} coincide with white positions in the constraining checkerboard pattern, wherein $g_{s1} > g_{s2} > g_{s3}$ and wherein the gray level g_{s3} corresponds to a black dither of 50% or less.

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A close reading of Stanich reveals that the text cited by the Examiner, the text at col. 3 lines 29-37 and col. 5 lines 16-19 and lines 30-36, simply does not and cannot support the Examiner's assertion regarding the teachings of Stanich. The cited text of col. 3 simply states that the when generating screens using the method disclosed in Stanich that a clustering requirement can be turned on or off for different gray levels. The text at col. 5 lines 30-36 provides that immediate horizontal or vertical neighbors is one option for determining the property of one pixel being adjacent to another for the purpose of clustering and cites diagonal relationships as another option. Finally, the text at col. 5, lines 16-19 simply provides that when selecting an initial sequence of patterns, the patterns can be periodic and that one example of a periodic pattern is "where the black pixels are arranged in a checkerboard pattern."

Using the teachings from Stanich set out above, the Examiner contends that not placing pixels vertically or horizontally adjacent to each other until after a gray level threshold when the initial patterns includes the checkerboard pattern will limit using a constrained checkerboard pattern (*i.e.*, black pixels will, by definition, correspond only to black squares within the checkerboard) until a gray level threshold is reached. Assuming, for argument, that the above statement is taught, what the Examiner does not state or identify any teaching within Stanich or elsewhere of screens in which the threshold values corresponding to gray levels between g_{s2} and g_{s3} coincide with white positions in the constraining checkerboard pattern wherein the gray level g_{s3} corresponds to a black dither of 50% or less and the gray level g_{s2} corresponds to a black dither that is less than (*i.e.*, lighter than) that of g_{s3}. That is, the screens for some set of gray levels corresponding to a black dither of 50% or less, the black pixels added for those gray levels constrained to white squares on a checkerboard pattern. Moreover, such a teaching is inconsistent with, and thus cannot be taught by, Stanich. More

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specifically, as Stanich teaches that the initial patterns must satisfy the subset requirement (*i.e.*, any pixel that is black in a lighter gray level must also be black the darker gray level), if one uses the checkerboard pattern, one cannot place the black pixels on white squares for black dither of 50% or less.

As set forth above, the Examiner has failed to make a prima facie rejection under 102(e) and claims 1 and 9 are allowable over the art of record. Thus, the rejection of claims 1 and 9 should be withdrawn. Claims 2 - 5 depend from claim 1 and claims 10 - 12 depend from claim 9. Thus, as claims 1 and 9 are allowable, claims 2 - 5 and 10 - 11 as well as newly added claims 12 - 15 are also allowable.

Claim 6 has also been rejected under 35 U.S.C. §102(e) as being anticipated by Stanich. To support the rejection of claim 6, the Examiner cites generally cites the text at col. 5 lines 9-37 and substantially all the text from col. 5, line 60 through col. 6, line 43. Applicant respectfully submits that the Examiner has failed to set out a prima facie case of anticipation of claim 6 as Stanich fails to teach or suggest each of the elements of claim 6. In particular, Stanich does not teach or suggest a method of generating a halftone screen which includes generating a screen pattern for a gray level that is darker than a second gray level, the screen pattern maintaining the arrangement of black pixels of every screen pattern corresponding to lighter gray levels and further including at least one more black pixel, wherein the least one more black pixel is at a location corresponding to a white pixel in the constraining checkerboard pattern and repeating the generation of a screen pattern for a plurality of gray levels between the second gray level and a third gray level wherein the third gray level corresponds to a black dither of 50% or less.

As discussed with respect to the rejection of claims 1 and 9, the Examiner does not identify any teaching, within Stanich or elsewhere, that when generating screens for some set of gray levels between a second gray

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level and a third gray level corresponding to a black dither of 50% or less, the added black pixels are constrained to white squares on a checkerboard pattern while for some set of gray levels between a first gray level and the second gray level, the black pixels are generally constrained to black squares on a checkerboard pattern. As previously indicated, such a teaching is inconsistent with and, thus, cannot be taught by Stanich. More specifically, as Stanich teaches that the initial patterns must satisfy the subset requirement (*i.e.*, any pixel that is black in a lighter gray level must also be black the darker gray level), if one uses the checkerboard pattern, one simply cannot place the black pixels on white squares for black dither of 50% or less in method taught by Stanich.

As the Examiner has failed to make a prima facie rejection of claim 6 under 102(e), claim 6 is allowable over the art of record and the rejection should be withdrawn. As claims 7 and 8 depend from claim 6 they are also allowable.

In forming the rejection of Claims 3 - 5, 7, 8, 10 and 11 under 35 U.S.C. §103(a) as being unpatentable over Stanich, the Examiner alleged that at the time of the invention, it would have been obvious to a person of ordinary skill in the art to assign thresholds between a 5% black dither and a 40% black dither to a first gray level group and/or assign thresholds between a 40% black dither and a 50% black dither to a second gray level group. The Examiner further alleged that Applicant has not disclosed that assigning a first gray level between a 5% black dither and a 40% black dither and/or a second gray level between 40% black dither and a 50% black dither provides an advantage, is used for a particular purpose or solves a stated problem. Furthermore, the Examiner alleged that one of ordinary skill in the art would have expected Applicant's invention to perform equally well with any generic black dithering group limitation because the image would appear equivalent.

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Applicant respectfully disagrees with the Examiner's assertion that Applicant has not disclosed that assigning the various values and ranges to the gray level provides an advantage, is used for a particular purpose or solves a stated problem. Applicant notes that disclosure and teaching of advantages provided, the particular purposes, and solutions of stated problems are provided in the application. In particular, and by way of example, Applicant notes such disclosures and teachings appear at page 8, lines 11-22; page 10, lines 5-13; and page 11, line 24 to page 12, line 6; page 12, lines 7-13; and page 14, line 9 to page 15, line3.

Applicant respectfully traverses the Examiner's assertions that it would have been obvious to a person of ordinary skill in the art to assign the various gray level values claimed and that one of ordinary skill in the art would expect Applicant's invention to perform equally well with any generic black dithering group limitation because the image would appear equivalent. To the extent that the Examiner contends that such assertions are well known to those skilled in the art or are a matter of common knowledge, Applicant hereby requests that the Examiner cite a reference to in support of such assertions. To the extent that such assertions and the rejection are based upon facts within the personal knowledge of the Examiner, Applicant hereby requests that those facts be stated as specifically as possible and that the Examiner provide an affidavit in support thereof. Such references and/or affidavit is subject to contradiction or explanation by affidavits of the Applicant and/or other persons. If the Examiner chooses to continue assertion of this rejection, the Examiner should withdraw the finality of a Final Office Action to permit applicant to submit one or more rebuttal or explanatory affidavits.

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     No additional fee is believed to be required for this amendment. However, the undersigned Xerox Corporation attorney hereby authorizes the charging of any necessary fees, other than the issue fee, to Xerox Corporation Deposit Account No. 24-0025. This also constitutes a request for any needed extension of time and authorization to charge all fees therefor to Xerox Corporation Deposit Account No. 24-0025.

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Respectfully submitted,
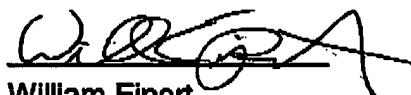
William Eipert
Attorney for Applicant
Registration No. 39,664
Telephone (585) 423-2520

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June 21, 2005
Xerox Corporation
Xerox Square 20A
Rochester, New York 14644

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